The Congruence Model
A Roadmap for Understanding Organizational Performance

The critical first step in designing and leading successful large-scale change is to fully understand the dynamics and performance of the enterprise. It's simply impossible to prescribe the appropriate remedy without first diagnosing the nature and intensity of an organization's problems.

Yet, all too often, senior leaders–particularly those who have just recently assumed their positions or joined a new organization–react precipitously to a presenting set of symptoms. They quickly spot apparent similarities between the new situations they face and problems they've solved in the past, and leap to the assumption that what worked before will work again.

The imperative to act is understandable but often misguided. Leaders would be well advised to heed the advice of Henry Schacht, who successfully led large-scale change as CEO of both Cummins Engine and Lucent Technologies: Stop, take a deep breath, give yourself some time, and "get the lay of the land" before leaping to assumptions about what should be changed, and how.

That's easier said than done. Without a comprehensive roadmap–a model–for understanding the myriad performance issues at work in today's complex enterprises, leaders are likely to propose changes that address symptoms, rather than causes. The real issues that underlie an organization's performance can easily go undetected by managers who view each new, unique set of problems through the well-worn filter of their past experiences and personal assumptions. Consequently, the "mental model" any leader uses to analyze organizational problems will inevitably influence the design of a solution and, by extension, its ultimate success.

Although there are countless organizational models, our purpose here is to describe one particular approach–the congruence model of organizational behavior. We've found the congruence model to be particularly useful in helping leaders to understand and analyze their organizations' performance. This approach has been developed and refined over nearly three decades of academic research and practical application in scores of major companies. It doesn't provide any pat answers or pre-packaged solutions to the perplexing issues of large-scale change. Instead, it is a useful tool that helps leaders understand the interplay of forces that shape the performance of each organization, and starts them down the path of working with their own people to design and implement solutions to their organization's unique problems.

In this paper, we'll describe the congruence model and suggest how it can provide a starting point for large-scale change. It has proven to be useful in so many widely varying situations because it meets the test of any successful model: It simplifies what is inherently complicated, reduces the complexity of organizational dynamics to manageable proportions, and helps leaders not only to understand, but also to actually predict, the most important patterns of organizational behavior and performance.

How the Model Developed

The organizational model most of us carry in our head is the age-old pyramid-shaped table of organization that typified institutions as old as the Roman Legions. That model was fine

back when the pace of institutional change was measured in decades, even centuries. Even through the first half of the 20th century, organizations changed so slowly that their essence could be captured in neat patterns of lines and boxes.

But in recent decades, the rapidly accelerating pace of change has made that static model obsolete. The old model merely documented hierarchical arrangements; the new models have to capture the dynamics of fluid relationships. The old model provided a reasonably clear snapshot of a moment in time; today, we need real-time, streaming video.

This new approach to understanding organizations really started in the 1960s, when researchers at the Harvard Business School and the University of Michigan began exploring the similarities between naturally occurring systems and human organizations. They discovered some striking parallels. In very basic terms, both take input from their surrounding environment, subject it to an internal transformation process, and produce some form of output (see Figure 1). In addition, both have the capacity to create and use feedback; in other words, they can use their output to alter their input and refine their internal processes.

However, it wasn't until the mid-1970s that systems theory found wide acceptance among students of organizations. Building upon the important work of earlier theorists (Daniel Katz and Robert Kahn, Jay Lorsch and Alan Sheldon, and John Seiler), David Nadler and Michael Tushman at Columbia University developed a simple, pragmatic approach to organization dynamics based on systems theory. At roughly the same time, Harold Leavitt at Stanford University and Jay Galbraith at MIT were simultaneously grappling with the same issues. Nadler and Tushman's efforts led to the development and refinement of the approach now known as the congruence model.

The congruence model suggests that in order to fully understand an organization's performance, you must first understand the organization as a system that consists of some basic elements:

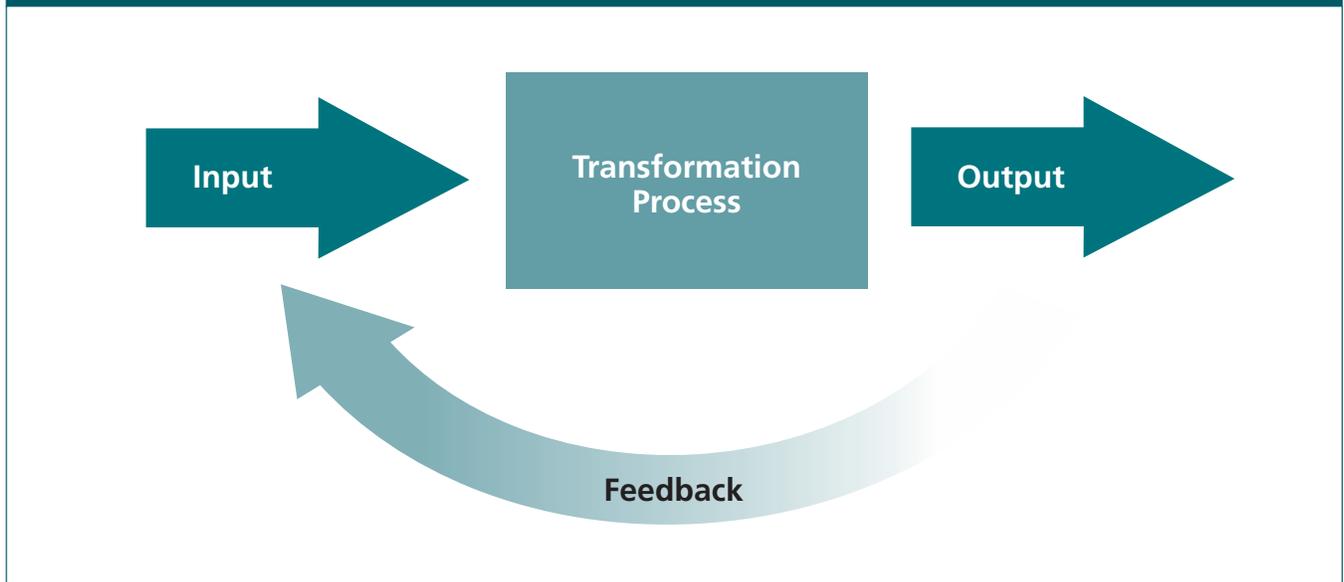Figure 1: The Basic Systems Model

Input → Transformation Process → Output

Feedback

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Figure 2: Key Organizational Input

INPUT	ENVIRONMENT	RESOURCES	HISTORY
Definition	All factors, including institutions, groups, individuals, events, etc., outside of the boundaries of the organization being analyzed, but having a potential impact on that organization.	Various assets the organization has access to, including human resources, technology, capital, information, etc., as well as less tangible resources (recognition in the market, etc.).	The patterns of past behavior, activity, and effectiveness of the organization that may have an effect on current organizational functioning.
Critical Features of the Input for Analysis	What demands does the environment make on the organization?	What is the relative quality of the different resources that the organization has access to?	What have been the major stages or phases of development of the organization?
	To what extent does the environment put constraints on organizational action?	To what extent are resources fixed, as opposed to flexible in their configuration?	What is the current impact of historical factors such as: Strategic decisions? Acts of key leaders? Crises? Core value and norms?

- The input it draws from both internal and external sources

- The strategy it employs to translate its vision into a set of decisions about where and how to compete, or, in the case of a government agency, the public policy results it wants to achieve

- Its output–the products and services it creates in order to fulfill its strategic objectives

- The critical transformation process through which people, working within the context of both formal and informal arrangements, convert input into output

The real issue is how the interaction of these components results, for good or ill, in some level of performance. So it's important to be clear about the nature of each component and its role in the organizational system.

Basic Organizational Components

Input

An organization's input includes the elements that, at any point in time, constitute the set of "givens" with which it has to work. There are three main categories of input, each of which affects the organization in different ways (see Figure 2).

1. The environment: Every organization exists within–and is influenced by–a larger environment, which includes people, other organizations, social and economic forces, and legal constraints. More specifically, the environment includes markets (clients or customers); suppliers; governmental and regulatory bodies; technological, economic, and social conditions; labor unions; competitors; financial institutions, and special-interest groups. The environment affects organizations in three ways:

- It imposes demands. For instance, customer requirements and preferences determine the quantity, price, and quality of the offerings the organization can successfully provide.

- It imposes constraints ranging from capital limitations or insufficient technology to legal prohibitions rooted in government regulation, court action, or collective-bargaining agreements.

- It provides opportunities, such as new market possibilities resulting from technological innovation, government deregulation, or the removal of trade barriers.

Every organization is directly influenced by its external environment; to put it even more emphatically, nearly all large-scale change originates in the external environment. The privatization of state-owned industries in Europe and the United Kingdom, for example, significantly altered the way they operate. To move from monopolies to a competitive landscape, utility companies were forced to change the ways they deal with customers and employees.

In the United States, the market's saturation with expensive servers and mainframes on the high end, and intense competition from low-cost producers of desktop computers on the other, drove IBM's dramatic makeover into an integrated service provider. And major changes in the laws governing interstate banking led to widespread acquisitions of local financial institutions by major banks whose operations had previously been limited to their home state or region, prompting major strategy changes across the industry.

2. **Resources:** The second source of input is the organization's resources, including the full range of accessible assets–employees, technology, capital, and information.
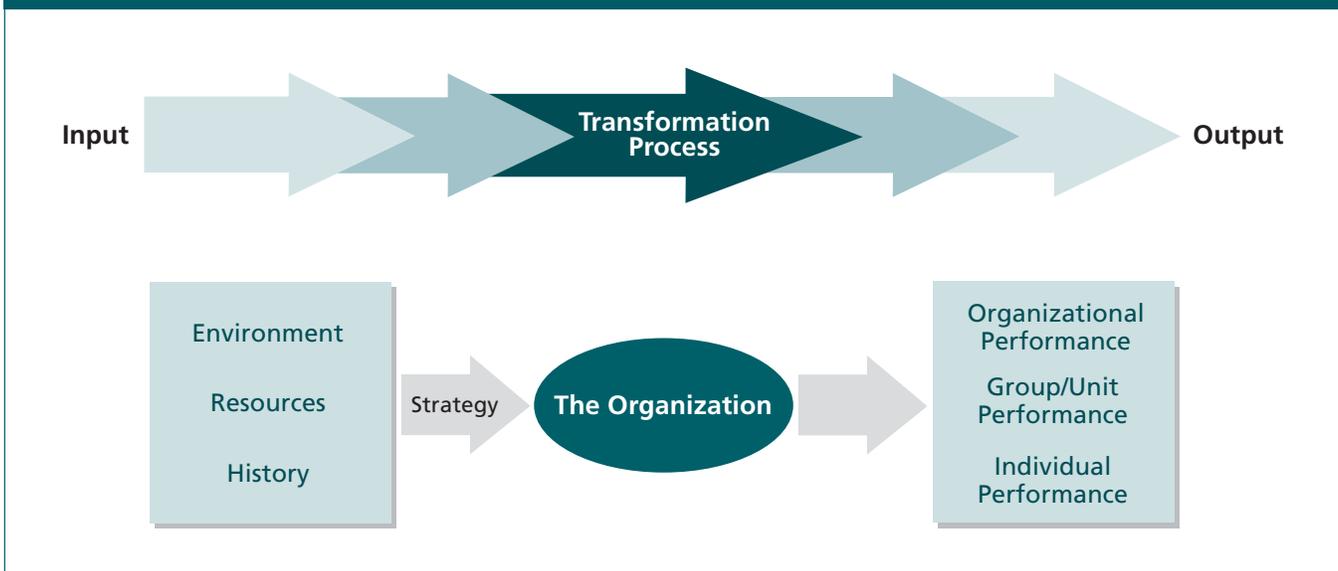
Resources may also include less tangible assets, such as the organization's reputation among key outside groups–customers, investors, regulators, competitors, etc.–or its internal organizational climate.

3. **History:** There is considerable evidence that the way an organization functions today is greatly influenced by landmark events that occurred in its past. In order to reasonably predict an organization's capacity to act now or in the future, you must understand the crucial developments that shaped it over time–the strategic decisions, behavior of key leaders, responses to crises, and the evolution of values and beliefs.

The history of Xerox is a case in point. In the 1950s, Xerox approached industry giants–IBM, GE, RCA–looking for a partner to help it produce, sell, and distribute its revolutionary new copier. No one was interested, so Xerox was forced to work on its own. Ironically, the result was one of the most successful product launches in history. The lesson from the company's seminal victory, which influenced its business strategy for decades, was that partnering was for other companies, not for Xerox.

The historical lesson at Corning Inc. was just the opposite. Since its earliest days, when Corning Glass Works teamed up with Thomas Edison to produce the first commercially viable light bulbs, the company has fueled its growth through a variety of creative collaborations with other companies around the globe. Those mergers, partnerships, and joint ventures provided Corning with new technologies in evolving growth businesses as well as access to new markets for its existing products. Clearly, two very different histories led directly to two very different strategic philosophies.

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Figure 3: The Organization as a Transformation Process

Input → Transformation Process → Output

Environment		Organizational Performance
Resources	Strategy → The Organization →	Group/Unit Performance
History		Individual Performance

Strategy

Every company faces two levels of strategic issues. The first is corporate strategy, involving portfolio decisions about which businesses the company ought to be in. For government and not-for-profit organizations, "corporate strategy" often reflects a combination of the legislative mandate, which defines the public-policy objectives the organization has been created to address, and organization-specific priorities. The second level involves business strategy, a set of decisions about how to configure the organization's resources in response to the demands, threats, opportunities, and constraints of the environment within the context of the organization's history. Together, these choices constitute what our colleagues at Mercer Management Consulting describe as a "business design," which includes five strategic elements:

- **Customer selection:** Who are my customers, and why do I choose to serve them rather than any others?

- **Unique value proposition:** Why do my customers buy from me?

- **Value capture:** How do I retain, as profit, a portion of the value I deliver to customers?

- **Strategic control:** How do I protect my profits from competitor imitation and customer power?

- **Scope:** What activities in the value chain must I engage in to remain relevant to customers, to generate high profits, and to create strategic control?

Output

The ultimate purpose of the enterprise is to produce output–the pattern of activities, behavior, and performance of the system at the following levels (see Figure 3):

- **The total system:** The output measured in terms of goods and services produced, revenues, profits, shareholder return, job creation, community impact, policy or service outcomes, etc.

- **Units within the system:** The performance and behavior of the various divisions, departments, and teams that make up the organization

■ **Individuals:** The behavior, activities, and performance of the people within the organization

In our organizational model, "output" is a broad term that describes what the organization produces–how it performs, and how effective it is. It refers to the organization's ability not only to create products and services and achieve results but also to achieve a certain level of individual and group performance within the organization.

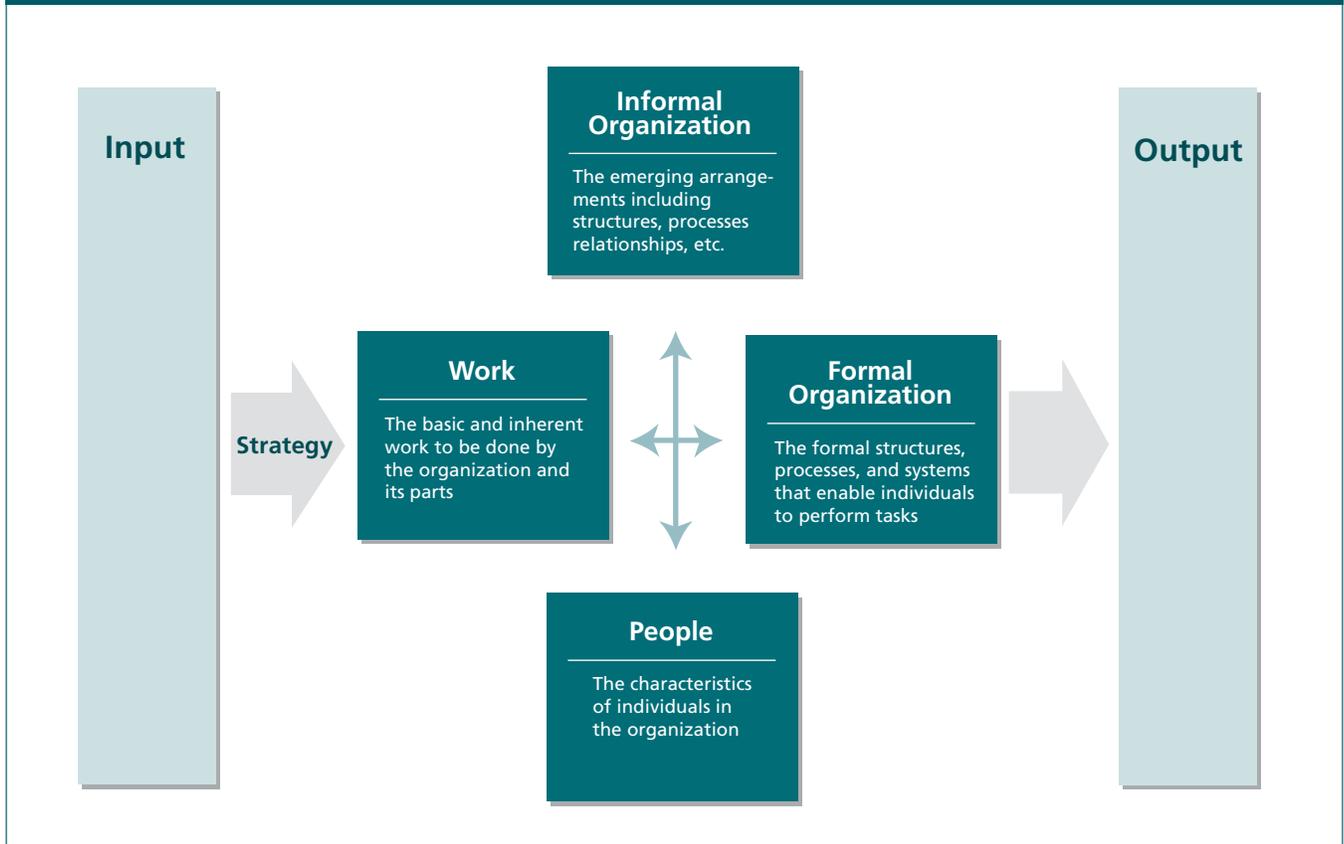**The Organizational Transformation Process**

The heart of the model is the transformation process, embodied in the organization, which draws upon the input implicit in the environment, resources, and history to produce a set of output. The organization contains four key components: the work; the people who perform the work; the formal organizational arrangements that provide structure and direction to their work; and the informal organization, sometimes referred to as culture or operating environment, that reflects their values, beliefs, and behavioral patterns.

The real challenge of organizational design is to select from a range of alternatives the most appropriate way to configure the organizational components to create the output required by the strategy. To do this, it is essential to understand each organizational component and its relationship to the others (see Figure 4).

■ **The work:** We use this general term to describe the basic and inherent activity engaged in by the organization, its units, and its people in furthering the company's strategy. Since the

Figure 4: Key Organizational Components

Input

Strategy

Informal Organization
The emerging arrangements including structures, processes relationships, etc.

Work
The basic and inherent work to be done by the organization and its parts

Formal Organization
The formal structures, processes, and systems that enable individuals to perform tasks

People
The characteristics of individuals in the organization

Output

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performance of this work is one of the primary reasons for the organization's existence, any analysis from a design perspective has to start with an understanding of the nature of the tasks to be performed, anticipated work flow patterns, and an assessment of the more complex characteristics of the work–the knowledge or skills it demands, the rewards it offers, and the stress or uncertainty it involves.

Consider retail chains Harvey Nichols and Wal-Mart. Both are engaged in furthering their retailing efforts, each through markedly different competitive strategies. Wal-Mart focuses on low cost and has processes designed to lower expenses and maintain low prices. The U.K.'s Harvey Nichols, on the other hand, caters to a more affluent consumer base, offering customers a unique shopping experience with merchandise and sales force positioned accordingly. Despite their differences, each engages in the basic work processes inherent in store-based consumer retailing.

- **The people:** It's important to identify the salient characteristics of the people responsible for the range of tasks involved in the core work. What knowledge and skills do they bring to their work? What are their needs and preferences, in terms of the personal and financial rewards they expect to flow from their work? What are their perceptions and expectations about their relationship with the organization? What are their demographics, and how do they relate to their work?

- **The formal organization:** This is made up of the structures, systems, and processes each organization creates to group people and the work they do and to coordinate their activity in ways designed to achieve the strategic objectives.

- **The informal organization:** Co-existing along-side the formal arrangements are informal, unwritten guidelines that exert a powerful influence on people's collective and individual behavior. The informal organization encom- passes a pattern of processes, practices, and political relationships that embodies the values, beliefs, and accepted behavioral norms of the individuals who work for the company. It is not unusual for the informal organization to actually supplant formal structures and processes that have been in place so long that they have lost their relevance to the realities of the current work environment.

The Concept of Fit

The final element in the congruence model is the concept of fit. Very simply, the organization's performance rests upon the alignment of each of the components–the work, people, structure, and culture–with all of the others. The tighter the fit–or, put another way, the greater the congruence–the higher the performance.

Russell Ackoff, a noted systems theorist, has described the phenomenon this way: Suppose you could build a dream car that included the styling of a Jaguar, the power plant of a Porsche, the suspension of a BMW, and the interior of a Rolls Royce. Put them together and what have you got? Nothing. They weren't designed to go together. They don't fit.

The same is true of organizations. You can have stellar talent, cutting-edge technology, streamlined structures and processes, and a high-performance culture–but if they aren't designed to mesh with each other, you've got nothing.

Indeed, the congruence model suggests that the interaction between each set of organizational components is more important

Figure 5: Determining Degree of Fit

FIT	THE ISSUES
Individual–Formal Organization	To what extent individual needs are met by the organizational arrangements; to what extent individuals hold clear or distorted perceptions of organizational structures; to what extent individual and organizational goals converge.
Individual–Work	To what extent the needs of individuals are met by the work; to what extent individuals have skills and abilities to meet work demands.
Individual–Informal Organization	To what extent individual needs are met by the informal organization; to what extent the informal organization makes use of individuals' resources, consistent with informal goals.
Work–Formal Organization	Whether the organizational arrangements are adequate to meet the demands of the work; whether organizational arrangements tend to motivate behavior consistent with work demands.
Work–Informal Organization	Whether the informal organization structure facilitates work performance; whether it hinders or promotes meeting the demands of the work.
Formal Organization–Informal Organization	Whether the goals, rewards, and structures of the informal organization are consistent with those of the formal organization.

than the components themselves. Put another way, the degree to which the strategy, work, people, formal organization, and culture are tightly aligned will determine the organization's ability to compete and succeed (see Figure 5).

For example, consider two components: the work and the people. When the skills, knowledge, and aptitude of the individuals involved match the job requirements of the work at hand, you can reasonably expect a relatively high degree of performance.

Now let's assume that a restructuring has reassigned people doing related work to different parts of the organization, separating them into tightly bound units that lack sufficient processes for sharing information and coordinating activity. In that case, the formal organization will inevitably hinder performance, even if the right people are separately doing the right work.

Taking the argument one step further, assume that the work at hand requires considerable autonomy, real-time decisions, and occasional risks. However, if people have been conditioned over time to seek shelter in anonymity, evade

responsibility whenever possible, and trust in the wisdom of playing it safe, then merely shuffling the boxes on the table of organization won't get the job done. The work, the people, and the formal structures might be right, but the prevailing culture will keep getting in the way–a situation that will require some major, long-term changes. Without all the right pieces in place, performance will suffer.

In normal situations, managers constantly make adjustments to maintain fit among the various organizational components. However, companies periodically experience turbulence as the external environment exerts powerful forces–breakthroughs in technology, major changes in public policy, or the emergence of new players who alter the very basis of competition, for example. During these periods, simply maintaining the alignment of the organizational components will be insufficient, and in many cases, may well lead to disaster. These situations call for radical, or discontinuous, change, which sometimes involves the profound overhaul of most, if not all, of the organizational components.

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The transformation of one of our clients–a global high-tech company–provides a classic example of a complex organization that successfully "worked the model." After decades of industry dominance, the company suffered precipitous losses in market share and earnings as foreign competitors surged ahead with new technology, low prices, and superior quality. A renewed emphasis on quality enabled our client to avert a crisis, but there was clearly a need for a new strategic vision.

The vision they ultimately developed was right on target, but it wasn't enough. The company was still overly bureaucratic, slow to bring technological innovations to market, and out of touch with customers' needs. Quite simply, the organization was incapable of deploying the new strategy.

The first step to remedy this was a redesign of the formal structure. But once again, only one component of the organization had changed; the others–primarily the people and informal organization–were seriously out of alignment. To be effective, the company needed managers to play new roles that were out of sync with the traditional culture. That required an intense search–both inside and outside the company–for unconventional managers who could "break the mold."

Ultimately, the company succeeded–thanks, in large part, to a detailed conceptual roadmap that emphasized the importance of congruent relationships between all of the organizational components. They also maintained high performance by deliberately managing the alignment of their organizational components. The structure and the work support the strategy, and the operating environment now supports and advances people suited to the work and the structure.

Analyzing the Organization's Problems

The congruence model is more than an interesting way of thinking about organizational dynamics. Its real value lies in its usefulness as a framework–a mental checklist, if you will–for identifying the root causes of performance gaps within an organization. As suggested earlier, it provides a very general roadmap and a starting point on the path to fundamental enterprise change. It provides the conceptual framework for a change process that involves gathering data on performance, matching actual performance against goals, identifying the causes of problems, selecting and developing action plans, and, finally, implementing and then evaluating the effectiveness of those plans.

Our experience has led us to develop a general approach to using the congruence model for solving organizational problems. It includes the following steps:

1. **Identify the symptoms.** In any situation, initial information may reveal symptoms of poor performance without pinpointing real problems and their causes. Still, this information is important because it focuses the search for more complete data.

2. **Specify the input.** With the symptoms in mind, the next step is to collect data concerning the organization's environment, its resources, and critical aspects of its history. Input analysis also involves identifying the organization's overall strategy–its core mission, supporting strategies, and objectives.

3. **Define the output.** The third step is to analyze the organization's output at the individual, group, and organizational levels. Output analysis involves defining precisely what output is required at each level to meet the overall strategic objectives and then collecting data to measure precisely what output is actually being achieved.

4. **Determine the problems.** The next step is to pinpoint specific gaps between planned and actual output and to identify the associated problems–organizational performance, group functioning, or individual behavior, for example. Where information is available, it is often useful to identify the costs associated with the problems or with the failure to fix them. The costs might be in the form of actual cost, such as increased expenses, or of missed opportunities, such as lost revenue.

5. **Describe the organizational components.** This is where analysis goes beyond merely identifying problems and starts focusing on causes. It begins with a data collection process on each of the four major components of the organization. A word of caution: As we mentioned earlier, some of the most serious problems are the result of changes in the external business environment. So it's important to consider strategic issues before focusing too narrowly on organizational causes for problems; otherwise, the organization is in danger of merely doing the wrong thing more efficiently.

6. **Assess the congruence.** Using the data that have been collected, the next step is to assess the degree of congruence among the various organizational components.

7. **Generate hypotheses about problem causes.** This stage involves looking for correlations between poor congruence and problems that are affecting output. Once these problem areas have been identified, available data are used to test whether poor fit is, indeed, a key factor influencing output and a potential leverage point for forging improvement.

8. **Identify the action steps.** The final stage is to identify action steps, which might range from specific changes aimed at

relatively obvious problems to more extensive data collection. In addition, this step requires predicting the consequences of various actions, choosing a course of action, implementing it, allowing time for the process to run its course, and evaluating the impact.

Constantly be on the lookout for inappropriate fit among all of the internal components of the organization–the strategy, the work, the formal and informal organizations, and the people. Poor fit among any of the organizational components–between people and their work requirements, between formal structures and culture, and so on–can produce huge problems.

Nor can you assume that by changing one or two components of the model, you will cause the others to fall neatly into place. Profound change, in short, means working through the entire model.

Benefits of the Model

One of the congruence model's major benefits is that it provides a graphic depiction of the organization as both a social and technical system (see Figure 6). Looking at the illustration of the model, think of the horizontal axis–the work and the formal organization–as the technical-structural dimension of the operating organization. The vertical axis–the people and the informal organization–make up the organization's social dimension. You can't ignore either axis. In terms of congruence, everything has to fit.

Another way to think of those two dimensions is in computer terms. In recent years, the term "hardware" has become synonymous with the technical-structural dimension of the organization, while the term "software" has become

Figure 6: The Congruence Model

Input	**Informal Organization**
Environment	**Output**
Resources	**Work** — **Formal Organization**
History	**People**
Strategy	System / Unit / Individual

shorthand for the social aspects that shape the values, behavior, and performance of an organization's people. The metaphor has become so widespread because it works so well–and underscores the central notion that in both organizational and computer architecture, it is the proper fit between the key components that ultimately drives performance.

A second benefit of the congruence model is that it avoids strapping intellectual blinders on managers as they think their way through the complexities of change. The congruence model doesn't favor any particular approach to organizing. On the contrary, it says: "There is no one best structure. There is no one best culture. What matters is 'fit.'" This model does not suggest that you try to copy your competitor's strategy or structure or culture. It says your

most successful strategy will be one that accurately reflects your exclusive set of environmental realities, and the most effective way for you to organize is to ensure that the organizational components both support execution of your strategy and are congruent with each other and the unique aspects of your organization. It is a contingency model of how organizations operate and, as such, is adaptable to any set of structural and social circumstances.

Third, this model helps you understand the dynamics of change, because it allows you to predict the impact of change throughout the organizational system. Major change almost always originates in the external environment. It next shows up in comparisons of output to expectations, when people either experience or anticipate changes. That leads to a review of

strategy–what are we going to do to regain or extend our competitive advantage? Inevitably, this means changes in work and the formal organization–which is where many companies stop, without undertaking the difficult but critical job of reshaping the culture.

Finally, it's important to view the congruence model as a tool for organizing your thinking about any organizational situation, rather than as a rigid template to dissect, classify, and compartmentalize what you observe. It's a way of making sense out of a constantly changing kaleidoscope of information and impressions– to return to our earlier metaphor, it's a way to think about organizations as films rather than snapshots. You can't look at a complex organization as a static pattern of photos, capturing a narrow scene as it existed at one point in time, all neatly pasted in a scrapbook. Instead, it's a dynamic set of people and processes, and the biggest challenge is to digest and interpret the constant flow of pictures–the relationships, the interactions, the feedback loops, all the elements that make an organization a living organism. In the end, it is those dynamics that make change at once so fascinating and so challenging.

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